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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,926	07/25/2007	Keisuke Kajihara	14434.110USWO	3779

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EXAMINER	
CROUSE, BRETT ALAN	
ART UNIT	PAPER NUMBER
1794	
MAIL DATE	DELIVERY MODE
01/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,926	KAJIHARA ET AL.	
	Examiner	Art Unit	
	Brett A. Crouse	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment, filed 6 October 2008. Claims 1-10 are pending.

2. The objection(s) to:

the disclosure and claims 3 and 6

are withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura et al., US 5,523,154, hereinafter known as Okamura, in view of Girgis, US 4,476,191, hereinafter known as Girgis.

Okamura teaches:

> Abstract, teaches a treating agent comprising (A) a rubber latex which further comprises a nitrile group, and additionally possesses an iodine value of 120 or less, (B) a second rubber latex, and (C) resorcinol/formaldehyde condensate. The relative amounts by

weight of (A), (B), and (C) are 15 to 80 percent, 5 to 70 percent, and 2 to 15 percent respectively. The passage additionally teaches a glass fiber treated with the treating agent and a rubber article comprising the treated glass fiber.

Column 3, lines 46-59, teach the second rubber latex possesses an iodine value of 200 or more.

Column 5, lines 4-15, teach coating a glass fiber, embedding the glass fiber in unvulcanized rubber, and vulcanizing the combination.

Column 5, lines 27-43, teach the primary coating layer can have a secondary coating layer deposited thereon.

Column 8, line 62 through column 9, line 14, example 2, teaches a treating agent composition comprising a nitrile containing latex, a water-soluble resorcinol/formaldehyde condensate, a vinylpyridine/butadiene/styrene terpolymer latex, and a chlorosulfonated polyethylene latex.

Column 7, lines 48-52, example 1, teach the treating agent is applied to the glass fibers in the amount of 20 weight percent.

Okamura does not teach:

Okamura provides as a suitable example of resorcinol-formaldehyde condensation a reaction in alkaline medium. Okamura is silent with regard to the formation of the resorcinol-formaldehyde condensation product in an acidic medium (novolac condensation). Okamura is also silent with regard to phenolic products other than resorcinol-formaldehyde condensates.

Girgus teaches:

Abstract, teaches a two step method for forming an adhesive system. The first step provides the formation of an aldehyde resin mixture and the second step mixes the aldehyde resin mixture with one or more elastomeric materials and additives. The system is used to coat filamentary materials for use as reinforcement materials in rubber.

Column 1, line 67 through column 2, line 4, teaches that it is known in the prior art to form a resorcinol-formaldehyde product in an alkaline medium.

Column 4, lines 45-52, teach the pH of the first step of the process is preferably between about 3.5 to 5.5. This is equated with a Novolac type reaction. Girgus teaches in the background, column 2, lines 46-51, the first step of the reaction under acidic conditions. The second step of the process is under alkaline conditions.

Column 6, line 22-59, teach a mole ratio of formaldehyde to resorcinol in the range of about 0.8 to about 1.5. The passage also teaches pH range of about 3.5 to 5.5 prevents undesirable cross-linking.

Column 5, lines 41-60, teach the two step process results in toughness while maintaining flexibility.

Column 5, line 61 through column 6, line 32, teaches that mixtures of phenols and mixtures of aldehydes can be used to form the condensation product(s). Phenolic compounds having one OH group such as phenol are taught.

Column 7, line 64 through column 8, line 14, teaches the phenolic aldehyde resin can be suitably used with various rubbers including vinylpyridine-styrene-butadiene.

Column 8, line 64 through column 9, line 1, teaches the coating of various types of fibers with the composition. Glass fibers are a preferred material.

It would have been obvious to one of ordinary skill in the art to form a phenolic-aldehyde condensation product as taught by Girgus and use this reaction product in the composition of Okamura in order to provide a composition which would improve the toughness while maintaining the flexibility of the material of Okamura, such as for subsequent use in the flexible rubber belt of Okamura.

Response to Arguments

With respect to the rejection over Okamura in view of Girgus applicant argues Okamura fails to teach or suggest a coating agent which comprises a novolac phenolic resin obtained through the reaction of a phenol and formaldehyde in the presence of an acid catalyst and a water soluble resorcinol / formaldehyde condensate which is a novolac condensation product and that Girgus fails to cure the deficiency. The examiner respectfully disagrees for the reasons below.

A novolac condensation product provides a phenol bridged to a second phenol ring via an alkylene group such as a methylene group. Girgus, in formula(I) of column 4, teaches the resulting structure of the phenolic compound resulting from the process of Girgus. The claim limitation of a novolac-type condensation product is a product-by-process step and the resulting compound of Girgus is within the scope of a novolac-type condensation product.

Applicant also argues that Girgus teaches resorcinol and phenol combinations in column 6, lines 3-12 and that the amount of phenol in the resin of Girgus is small. It is noted that the claim limitation with respect to the amount of phenol resin component requires only 0.01 weight

percent of material. Additionally, it is noted by the examiner that Girgus in column 6, lines 9-12, indicates resorcinol and phenol as a preferred combination.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brett A. Crouse whose telephone number is (571)-272-6494. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald L. Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. A. C./
Examiner, Art Unit 1794

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1794